



Team spirit Emulsion



Dynasol
Group

dynasolgroup.com

Experience

Expertise in a particular sport
can be acquired through
different combinations
skills, attributes and capabilities





Dynasol
Group

EMULSION

In 1999 Repsol and KUO group joined forces in a global business project focused on the production of synthetic rubber based on solution and the development of new products. The team consists of seven different nationalities and has three production centers located in Spain, Mexico and China.

Sales offices serve more than 500 clients in 70 different countries. In 2015 during this international expansion strategy Repsol and Kuo Group strengthen their partnership with the incorporation of the Spanish company General Química one of the leading producers of catalysts, specialty chemicals and organic dyes.

As part of the new agreement KUO Group brings to the new JV it's emulsion business unit, Industrias Negromex who has more than 40 years of experience producing Emulsion Synthetic Rubber and has plants located in Altamira, Mexico, and China; the company's wide range of products serve the tire, industrial, friction, adhesive, footwear, chewing gum, and retread segments.

All these businesses have now join forces as Dynasol Group becoming one of the world leaders in the Synthetic Rubber and Rubber Chemical markets with revenues estimated at up to more than 700 million dollars and a production of 500,000 tons per year.



Resilience

The art of adapting
to the environment
in speed and endurance





Dynasol
Group

Emulsion

The production site is located in **Altamira, Tamaulipas, Mexico** with a capacity of **130,000 TPY SBR and NBR**.

Dynasol Group has a JV in **China** located in **Nanjing Jiangsu** province with a production capacity of 30,000 TPY of NBR.

The main markets we serve are tire, tire retread, automotive, seals, under carpet, FDA seals, conveyor belts, chewing gum, hose, rolls, insulate, plastic, friction, technical articles, adhesives, shoes, molded parts, mats, O-ring, paper and textile coating.

EMULSION SBR

Cold SBR Emulprene

Emulprene cold is a styrene-butadiene copolymer produced by a cold polymerization using fatty and rosin acid as emulsifier, coagulated by salt-acid system and stabilized with a non-staining antioxidant. These polymers offers good mechanical properties, abrasion and tear resistance and are widely used in tires, retread, footwear soles, hoses, tubes, conveyor belts and a great variety of molded and extruded mechanical goods.

Oil Extended SBR Emulprene

Emulprene Oil Extended product portfolio offers different types which fulfill the actual requirements for the tire industry in regard of environment friendly oils. Different stabilization systems allows to use the products in color sensitive applications. They are used in the manufacture of tires, retreading, conveyor belts, hoses, mechanical goods for its excellent processing properties.



HSR Emulprene

The High Styrene Masterbatch is excellent for improving hardness and stiffness in floor tiles, shoe soles, rolls sporting goods, extrusion and hard rubber compounds. They provide reinforcement to BR, CR, EPDM, NBR, SBR, IR, and natural rubber, increasing hardness, rigidity, abrasion, and tear resistance.

Latex SBR Arlatex

Arlatex is a water dispersion of copolymer of styrene-butadiene made by emulsion polymerization it could be carboxylic or not. It is used in applications such as carpets, textile and paper coating.

CBMB Emulblack Carbon black masterbatch

Offers excellent physical properties and outstanding processing characteristics due to the complete dispersion of the carbon black and processing oil in the polymer. Is recommended for use in tires, tread rubber and molded and extruded mechanical goods.

SMB Emulsil Silica masterbatch

This product line is a unique family of patented products designed to serve a wide range of silica-rubber applications, including Passenger tires, Truck & Bus tires, Off-Road tires, Conveyor belts & rollers, Footwear soles and other industrial rubber goods.



HSBR Emulprene Non-Crosslinked

Are used in the manufacture of a variety of adhesives and sealants. These linear, non-crosslinked polymers produce an excellent tack for bonding, coating and sealing applications. Product is available in several grades, providing a wide range of solubility and viscosity, cohesive strength and holding power can be achieved.

HSBR Emulprene Crosslinked

Produce adhesive and sealants with a non-stringy, buttery consistency. They are particularly useful for caulking compounds, mastics and sprayable adhesives. Besides the conventional bale form, several of these polymers are available in crumb form. These fast dissolving, low solution viscosity crumb polymers can help to reduce mixing time, use less solvent and coat faster.



EMULSION SBR

APPLICATION GUIDE

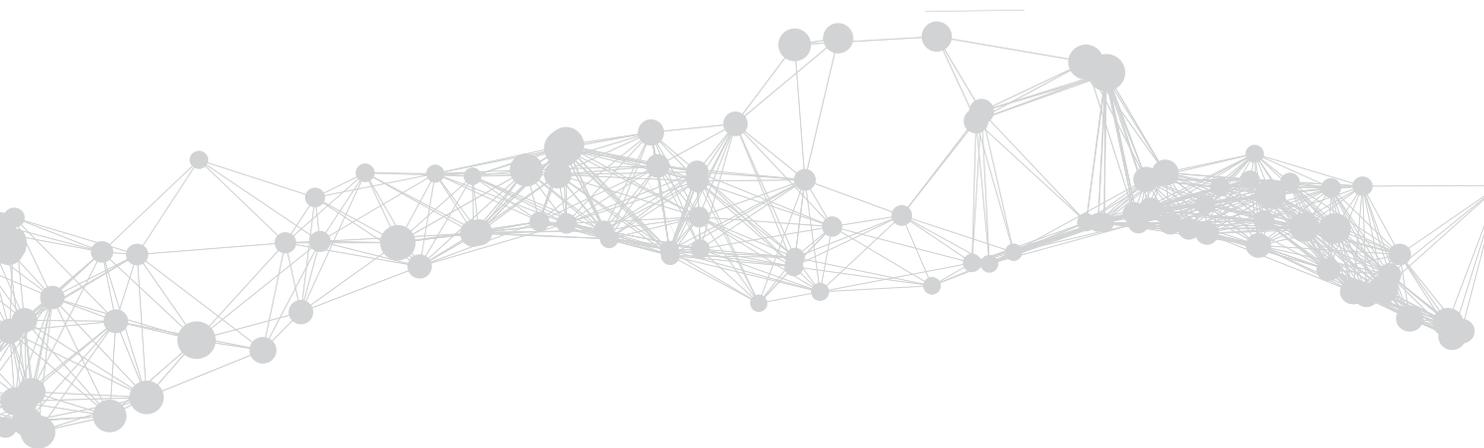
SBR PRODUCT

Type	Brand	Grade	Bound styrene (%)	PH	Black type	Oil	ML	UMS	Brookfield viscosity (cps)	Black PHR	Solids content (%)
Cold SBR	Emulprene	1500	23.5				52				
Cold SBR	Emulprene	1500A	23.5				51				
Cold SBR	Emulprene	1502	23.5				52				
Cold SBR	Emulprene	1502A	23.5				51				
Cold SBR	Emulprene	1502CR	23.5				52				
Cold SBR	Emulprene	1509	23.5				35				
Cold SBR	Emulprene	1509A	23.5				35				
Cold SBR	Emulprene	10140	21				25				
Oil Extended SBR	Emulprene	1712	23.5			HAO	46				
Oil Extended SBR	Emulprene	1723	23.5			TDAE	48				
Oil Extended SBR	Emulprene	1732	32			NAPH	46				
Oil Extended SBR	Emulprene	1778R	23.5			NAPH	48				
Oil Extended SBR	Emulprene	1783	23.5			RAE	50				
HSBR	Emulprene	1006	23.5				50				
HSBR	Emulprene	1006CR	23.5				50				
HSBR	Emulprene	1009L	23.5				40				
HSBR	Emulprene	1009LCR	23.5				40				
HSBR	Emulprene	1009H	43.5				48				
HSBR	Emulprene	1009HCR	23.5				48				
HSBR	Emulprene	1011	23.5				54				
HSBR	Emulprene	1011CR	23.5				54				
HSBR	Emulprene	1012	23.5				120				
HSBR	Emulprene	1012CR	23.5				120				
HSBR	Emulprene	1013	43				47				
HSBR	Emulprene	1013A	43				45				
HSBR	Emulprene	1013ACR	43				45				
HSBR	Emulprene	1028A	47.5				57				
HSBR	Insagum	1027	24				52				
HSBR	Insagum	1028	47.5				58				
HSR	Emulprene	260	63.5								
HSR	Emulprene	261	74								
Latex SBR	Arlatex	1185E		7.2 - 8					300 max		49 - 51
Latex SBR	Arlatex	1215E		8.1 - 8.9					300 max		43 - 45
Latex SBR	Arlatex	1372R		9 - 9.4					500 max		52 - 53
Latex SBR	Arlatex	1490E		9.5 - 12					200 max		38 min
CBMB	Emulblack	1606R	23.5		N330	HAO		65+/-10		52	
CBMB	Emulblack	1847K	23.5		N339	HAO		55+/-10		75	
CBMB	Emulblack	1848	23.5		N339	HAO		55+/-10		82.5	



Applications

Tire
Adhesives
Tire, seals, hose, footwear, mechanical goods, friction
Adhesives
Tire, seals, hose, footwear, mechanical goods, friction
Sponge, seals, hose, footwear, friction
Seals, hose, footwear, mechanical goods
Tire, mechanical goods
Tire, sponge, hose, rolls, mechanical goods
Tire, sponge, hose, rolls, mechanical goods
Tire, sponge, hose, rolls, mechanical goods
Tire, sponge, hose, rolls, mechanical goods, seals, footwear
Tire, sponge, hose, rolls, mechanical goods, seals, footwear
General purpose PSA, High filler loading, Brake friction, Floor tile, Calendared sheets, Cove base
General purpose PSA, Brake friction
Expandable automotive sealants, PSA, Caulks, Process aid in extrusion and calendaring for dimensional stability, Construction mastics and caulks
Expandable automotive sealants, PSA, Caulks, Process aid in extrusion and calendaring for dimensional stability, Construction mastics and caulks
PSA Tape, Spray adhesive, Process aid for dimensional stability during extrusion, Calendaring
PSA Tape, Spray adhesive, Process aid for dimensional stability during extrusion, Calendaring
PSA with balanced adhesion, Shear and tack, Tire bead wire, Optimum tack
PSA with balanced adhesion, Shear and tack, Tire bead wire, Optimum tack
PSA tape with excellent cohesion
PSA tape with excellent cohesion
PSA tape with excellent cohesive strength, Firm film, Construction mastics and caulk, High green strength
Adhesives, mechanical goods
PSA tape with excellent cohesive strength, Firm film, Construction mastics and caulk, High green strength
Adhesives
Chewing gum
Chewing gum
Tire, footwear
Tire, footwear
Textile
Paper coating
Textile, carpet
Textile
Tire, custom mix, mechanical goods
Tire, custom mix, mechanical goods
Tire, custom mix, mechanical goods



COLD SBR | EMULPRENE

Brand Grade	Description	Uses	Styrene (%)	ML 1+4 100°C
Emulprene 1500	Emulprene 1500 is a styrene-butadiene copolymer, cold polymerized using a rosin acid soap. Previously to the salt acid coagulation, a non-staining stabilizer is added in the manufacturing process. The product does not contain nitrosamine promoters.	Is widely used as raw material in tire, suitable for molded and extruded mechanical goods.	23.5	52
Emulprene 1500A	Emulprene 1500A is a styrene-butadiene copolymer, cold polymerized using a rosin acid soap. Previously to the alum-acid coagulation, a non-staining stabilizer is added in the manufacturing process. The product does not contain nitrosamine promoters.	Suitable for molded and extruded mechanical goods and sealants applications.	23.5	51
Emulprene 1502	Emulprene 1502 is a styrene-butadiene copolymer, cold emulsion polymerized with fatty acid and rosin acid as emulsifier, coagulated by salt-acid system and stabilized with a non-staining antioxidant.	Widely used as raw material in tire, shoe sole and in various industrial products.	23.5	52
Emulprene 1502A	Emulprene 1502A is a styrene-butadiene copolymer, cold polymerized using a rosin acid soap. Previously to the alum-acid coagulation, a non-staining stabilizer is added in the manufacturing process. The product does not contain nitrosamine promoters.	Suitable for natural rubber in wide range of compounds, offering advantages of light colour, uniformity and low levels of impurities. It's good flow characteristics produce improvements in mixing and moulding behavior, It is used for food and pharmaceutical packaging and seals, baby bottle teats and health care, adhesives, chemical derivatives of rubbers.	23.5	51
Emulprene 1502CR	Emulprene 1502CR is a particulated styrene-butadiene copolymer, cold polymerized using fatty acid as emulsifier, coagulated with salt-acid and stabilized with a non staining antioxidant. This rubber is produced as free flowing dusted crumb which eliminates the need for size reduction equipment. Between 4 and 12 % of calcium carbonate is used as dusting agent.	Is widely used like raw material in neumatics, heels, Shoe soles and for the production of transparent goods, and light colors, in particulated form is used for the manufacturing of adhesives.	23.5	52
Emulprene 1509	Emulprene 1509 is a styrene-butadiene copolymer, cold emulsion polymerized with fatty acid as emulsifier, coagulated by salt-acid system and stabilized with a non-staining antioxidant.	Widely used in tire, heel and shoe sole formulations as well as in a vast array of industrial products.	23.5	35
Emulprene 1509A	Emulprene 1509A is a copolymer styrene-butadiene, cold emulsion polymerized used fatty acid as emulsifier, coagulated by alum-acid system and stabilized with a non staining antioxidant.	Is recommended for mechanical goods and sealing applications.	23.5	35
Emulprene 10140	Emulprene 10140 is a product manufactured by mixing a cold styrene-butadiene copolymer containing 5.5% bound styrene (80%) with high styrene resin latex (20%), coagulated by salt-acid system and stabilized with a non-staining antioxidant.	The masterbatch provides the user with an advantage through ease of processing and improved product quality, and it provides the stiffening effect to the final product. Uses: tires, footwear, sponges, other mechanical goods, etc.	21	25

OIL EXTENDED SBR | EMULPRENE

Brand Grade	Description	Uses	Styrene (%)	ML 1+4 100°C
Emulprene 1712	Emulprene 1712 is a copolymer styrene-butadiene cold emulsion polymerized used fatty acid as emulsifier, coagulated by salt-acid system and it is extended utilizing aromatic oil.	Used in tire formulations and in a variety of industrial products due to its excellent adhesion and processing properties.	23.5	46
Emulprene 1723	Emulprene 1723 is a copolymer styrene-butadiene cold emulsion polymerized used fatty and rosin acid as emulsifier, coagulated by salt-acid system and it is extended utilizing TDAE (Treated Distillate Aromatic Extract) an environmental friendly oil which comply with the EU directives.	Is used in the manufacture of tires and industrial products for its excellent processing properties.	23.5	48



Brand Grade	Description	Uses	Styrene (%)	ML 1+4 100°C
Emulprene 1732	Emulprene 1732 is a copolymer styrene-butadiene, cold emulsion polymerized used fatty acid as emulsifier, coagulated by salt-acid system and it is extended utilizing naphthenic oil.	Is used in the manufacture of tires and industrial products for its excellent processing properties.	32	46
Emulprene 1778R	Emulprene 1778R is a cold emulsion styrene-butadiene copolymer, polymerized using fatty acid and rosin acid as emulsifier, coagulated by salt-acid system and it is extended utilizing naphthenic oil and meets the European directive 2005/69/EC.	Is used in the manufacture of tires and industrial products for its excellent processing properties.	23.5	48
Emulprene 1783	Emulprene 1783 is a copolymer styrene-butadiene cold emulsion polymerized used fatty and rosin acid as emulsifier, coagulated by salt-acid system and it is extended utilizing RAE (Residual Aromatic Extract) an environmental friendly oil which comply with the EU directives.	Is used in the manufacture of tires, retreading, conveyor belts, hoses, mechanical goods for its excellent processing properties.	23.5	50

HSBR | EMULPRENE

Brand Grade	Description	Uses	Styrene (%)	ML 1+4 100°C
Emulprene 1006	Emulprene 1006 is a hot emulsion styrene-butadiene copolymer, polymerized using a fatty acid emulsifier and coagulated with salt-acid. It is a very light color product stabilized with a non-staining antioxidant.	Recommended for light colored; for adhesives, tire white sidewalls, transport and transmission belts, sponge materials, sporting goods, flooring, colored shoe soles and heels.	23.5	50
Emulprene 1006CR	Emulprene 1006CR is a crumb hot emulsion styrene-butadiene copolymer, polymerized using a fatty acid emulsifier and coagulated with salt-acid. It is a very light color product stabilized with a non-staining antioxidant, and presented as free flowing dusted crumb which eliminates the need for size reduction equipment. Between 7% and 12% of Calcium Carbonate is used as dusting agent.	Is recommended for light colored applications; for adhesives, tire white sidewalls, transport and transmission belts, sponge materials, sporting goods, flooring, colored shoe soles and heels.	23.5	50
Emulprene 1009L	Emulprene 1009L is a hot emulsion styrene-butadiene copolymer, slightly cross-linked with divinylbenzene. It is polymerized using fatty acid as emulsifier, coagulated with salt acid and stabilized with a non-staining, antioxidant.	Is a lower gel version of the E1009H it also reduces mill shrinkage and swelling in molding improving dimensional stability and outstanding surface texture of finished products. It is also widely used in sealants and adhesives giving good balance between adhesive and cohesive properties.	23.5	47
Emulprene 1009LCR	Emulprene 1009LCR is a crumb hot emulsion styrene-butadiene copolymer, slightly cross-linked with divinylbenzene. It is polymerized using fatty acid as emulsifier, coagulated with salt acid and stabilized with a non-staining, antioxidant. This rubber is produced as free flowing dusted crumb which eliminates the need for size reduction equipment. Between 7-12 % of Calcium carbonate is used as dusting agent.	Dissolves easily in solvents, being widely used as main ingredient for solvent based general purpose pressure-sensitive, aerosol, spray and laminating adhesives. It can also be used in caulks and sealants. Storage.	23.5	45
Emulprene 1009H	Emulprene 1009H is a hot emulsion styrene-butadiene copolymer, highly cross-linked with divinylbenzene. It is polymerized using fatty acid as emulsifier, coagulated with salt acid and stabilized with a non-staining antioxidant.	Emulprene 1009H is used to improve the dimensional stability during extrusion, molding and calendaring operations. It is also used in mist type spray adhesives. It exhibits excellent shear strength when used in PSA.	23.5	48
Emulprene 1011	Emulprene 1011 is a hot emulsion styrene-butadiene copolymer using rosin acid as emulsifier and coagulated with salt-acid. It is very light color product stabilized with a non-staining antioxidant.	Gives excellent green tack and adhesive properties with good balance of mechanical strength. Is recommended for molded and extruded mechanical goods, adhesives, caulks and sealants.	23.5	54



Brand Grade	Description	Uses	Styrene (%)	ML 1+4 100°C
Emulprene 1011CR	Emulprene 1011CR is a crumb of hot emulsion styrene-butadiene copolymer using rosin acid as emulsifier and coagulated with salt- acid. It is very light color product stabilized with a non-staining antioxidant. This rubber is produced as free flowing dusted crumb which eliminates the need for size reduction equipment. Between 4% and 12% of Calcium Carbonate is used as dusting agent.	E1012CR is the high molecular weight version of E1006CR, it dissolves readily in solvents and particularly useful as binder for fibrous materials and adhesives where increased cohesive strength is desired.	23.5	54
Emulprene 1012	Emulprene 1012 is a high viscosity hot emulsion styrene-butadiene copolymer, polymerized using a fatty acid emulsifier and coagulated with salt-acid.It is a very light color product stabilized with a non-staining antioxidant.	Particularly useful as a binder for fibrous materials and adhesives where increased cohesive strength is desired.	23.5	120
Emulprene 1012CR	Emulprene 1012CR is a crumb version of a high viscosity hot emulsion styrene-butadiene copolymer, polymerized using fatty acid emulsifier and coagulated with salt-acid. It is very light color product stabilized with a non-staining antioxidant, and presented as free flowing dusted crumb which eliminates the end for size reduction equipment. Between 4% and 12% of Calcium Carbonate is used as dusting agent.	E1012CR is the high molecular weight version of E1006CR, it dissolves readily in solvents and particularly useful as binder for fibrous materials and adhesives where increased cohesive strength is desired.	23.5	118
Emulprene 1013	Emulprene 1013 is a styrene-butadiene copolymer, hot polymerized using a fatty acid soap. It is coagulated with salt acid and stabilized with a non-staining antioxidant.	Emulprene 1013 is suitable for PSA and general purpose adhesive application. It is particularly suitable for PVC and automotive tape application. Can be blended with a partially crosslinked polymer such as Emulprene 1009 to formulate construction adhesive and caulks for dry wall installation.	43	47
Emulprene 1013A	Emulprene 1013A is a styrene-butadiene copolymer, hot polymerized using a fatty acid soap. Previously to the alum-acid coagulation, a non-staining stabilizer is added in the manufacturing process.	Suitable for adhesive applications it is particularly used for can-sealing compounds, tire liners, mechanical goods, including auto mounts, and household products.	43	45
Emulprene 1013ACR	Emulprene 1013ACR is a styrene-butadiene copolymer, hot polymerized using a fatty acid soap. Previously to the alum-acid coagulation, a non-staining stabilizer is added in the manufacturing process. This rubber is produced in free flowing crumb form which eliminates the need for milling, cutting, or grinding equipment. Between 7-12% of Calcium Carbonate is used as dusting agent.	E1013ACR is suitable for adhesive applications. It is particularly used for can-sealing compounds. Useful in blends with other elastomers to increase cohesive strength, and to provide higher green strength.	43	45
Emulprene 1028A	Emulprene 1028A is a high styrene, hot emulsion styrene-butadiene copolymer using fatty acid as emulsifier and coagulated with salt-acid. It is stabilized with a non-staining antioxidant. The product does not contain nitrosamine promoters.	This grade is exceptionally light colored. It features high green strength, low air permeability and excellent flow properties, it is recommended for use in adhesive, sealants, tire liners, mechanical goods and household products.	47.5	57

HSBR | INSAGUM

Brand Grade	Description	Uses	Styrene (%)	ML 1+4 100°C
Insagum 1027	Insagum IG1027 is a hot emulsion styrene-butadiene copolymer using vegetal fatty acid as emulsifier and coagulated with salt-acid. It is stabilized with BHT antioxidant. The product complies with U. S. FDA regulation 21 CFR §172.615 referenced to SBR used for Chewing Gum, 21 CFR 177.2600 Indirect food additives: Polymers. It meets the requirements in the Food Chemical Codex for 75/25 type SBR.	IG1027 is specially designed for chewing gum applications, giving softer chew.	24	52
Insagum 1028	Insagum IG1028 is a high styrene, hot emulsion styrene-butadiene copolymer using vegetal fatty acid as emulsifier and coagulated with salt-acid. It is stabilized with BHT antioxidant. The product complies with U. S. FDA regulation 21 CFR §172.615 referenced to SBR used for Chewing Gum, 21 CFR 177.2600 Indirect food additives: Polymers. It meets the requirements in the Food Chemical Codex for 50/50 type SBR.	IG1028 is specially designed for bubble gum applications, giving firmer chew and larger bubbles.	47.5	58



HSR | EMULPRENE

Brand Grade	Description	Uses	Styrene (%)	ASH (%)
Emulprene 260	Emulprene 260 is a self-reinforcing emulsion rubber due to its high styrene content. The design of the elastomer allows for excellent processability during mixing and the special antioxidant used in its manufacture make it non-staining.	E260 is used as a reinforcing agent that does not alter the final products specific gravity while increasing the hardness, rigidity, abrasive and tear resistance as well as improving the flexibility of vulcanized shoe-soles. This product can also be used as raw material in the manufacture of tires.	63.5	1.0 max
Emulprene 261	Emulprene 261 is a self-reinforcing emulsion rubber due to its high styrene content. The design of the elastomer allows for excellent processability during mixing and the special antioxidant used in its manufacture make it non-staining.	E261 is used as a reinforcing agent that does not alter the final products specific gravity while increasing the hardness, rigidity, abrasive and tear resistance as well as improving the flexibility of vulcanized shoe-soles. This product can also be used as raw material in the manufacture of tires.	74	1.0 max

LATEX SBR | ARLATEX

Brand Grade	Description	Uses	Solids content (%)	PH
Artalex 1185E	Arlatex 1185E is an aqueous dispersion of a carboxylated styrene-butadiene copolymer manufactured by polymerization in emulsion.	Used in tire formulations and in a variety of industrial products due to its excellent adhesion and processing properties.	48.0 - 51.0	7.2 - 8.0
Artalex 1215E	Arlatex 1215E is an aqueous dispersion of carboxylated styrene butadiene copolymer manufactured by emulsion polymerization.	Used in those applications that require high rigidity and tenacity, as well as reliable resistance to water. It can be blended with resins in where it provides certain flexibility in the final finished one without affect in its resistance. The monomer ratio in the latex produces a rigid hand.	43.0 - 45.0	8.1 - 8.9
Artalex 1372R	Arlatex 1372R is an aqueous dispersion of carboxylated styrene butadiene copolymer manufactured by emulsion polymerization.	Especially designed for the manufacturing of carpet and rug backings and as binder for fibers and fabrics. It can be used in single or double pan systems, in frothed or non-frothed process. Medium hand.	51.0 - 53.0	9.0 - 9.4
Artalex 1490E	Arlatex 1490E is an aqueous dispersion of a no-carboxylated styrene-butadiene copolymer manufactured by polymerization in emulsion.	Is a product designed to be used as coating to improve rigidity and tensile strenght in textile and cellulose products.	38 MIN	9.5 - 12.0



CBMB | EMULBLACK

Brand Grade	Description	Uses	Black type	UMS 1+ 4100°C
Emulblack 1606R	Emulblack 1606R is a black masterbatch based on cold sbr, aromatic oil and carbon black. polymerized polymer. SBR _____ 100 PTS HAO _____ 10 PTS Carbon Black N330 _____ 52 PTS	Offers excellent physical properties and outstanding processing characteristics due to the complete dispersion of the carbon black and processing oil in the polymer. Is recommended for use in tires, tread rubber and molded and extruded mechanical goods.	N330	65 +/- 10
Emulblack 1847K	Emulblack 1847K is a black masterbatch based on cold SBR, aromatic oil and carbon black. SBR _____ 100 PTS HAO _____ 50 PTS Carbon Black N339 _____ 75 PTS	Is designed especially for operations where fast, smooth extrusions are necessary, this masterbatch gives compounds with excellent extrusion characteristics and tread wear.	N339	55 +/- 10
Emulblack 1848	Emulblack 1848 is an general purpose SBR oil/black masterbatch based on 1712 latex and N339 carbon black. SBR _____ 100 PTS HAO _____ 62.5 PTS Carbon Black N339 _____ 82.5 PTS	Designed especially for tread rubber and extruded goods this masterbatch produces compounds with excellent extrusion characteristics, abrasion resistance and tread wear.	N339	55 +/- 10



EMULSION NBR

NBR 2.0 Paracril / NBR Paracril

Paracril NBR grades are produced by cold and hot polymerization process. The cold process yields linear polymers with good processing characteristics and solubility in polar solvents. The hot polymerization process leads to more branching. Branching in the hot Paracril grades is more developed in the higher viscosity grades. The hot polymers offer improved green strength.

Crosslinked Paracril NBR grades are unique in processing and function.

They are produced by chemical crosslinking or conversion branched. The crosslinked grades have varying degrees of reduced mill shrink to as low as 5% versus linear grades of over 35% mill shrink. These grades offer benefits in thermoplastic modification for lower compression set and green strength improvement in thermoset recipes.

Paracril 34PE40N, a plasticizer extended grade, contains 50 parts of DINP in a high molecular weight NBR used in the production of low durometer products such as roll covers.



NBR Powder Paracril

NBR Powder is used in friction products such as brake pads and clutch discs. The NBR for these applications is typically higher acrylonitrile content and viscosity.

NBR Crumb Paracril

Paracril NBR Crumb is a Ground nitrile powder used as a plastic modifier such as PVC, thermoset and adhesive applications. The NBR for these applications is typically medium and high acrylonitrile content and viscosity.

NBR Spray Dried Paracril

The NBR SD acts as a secondary binder that provides a higher coefficient of friction, antifading performance, and fuel oil resistance with reduced noise.



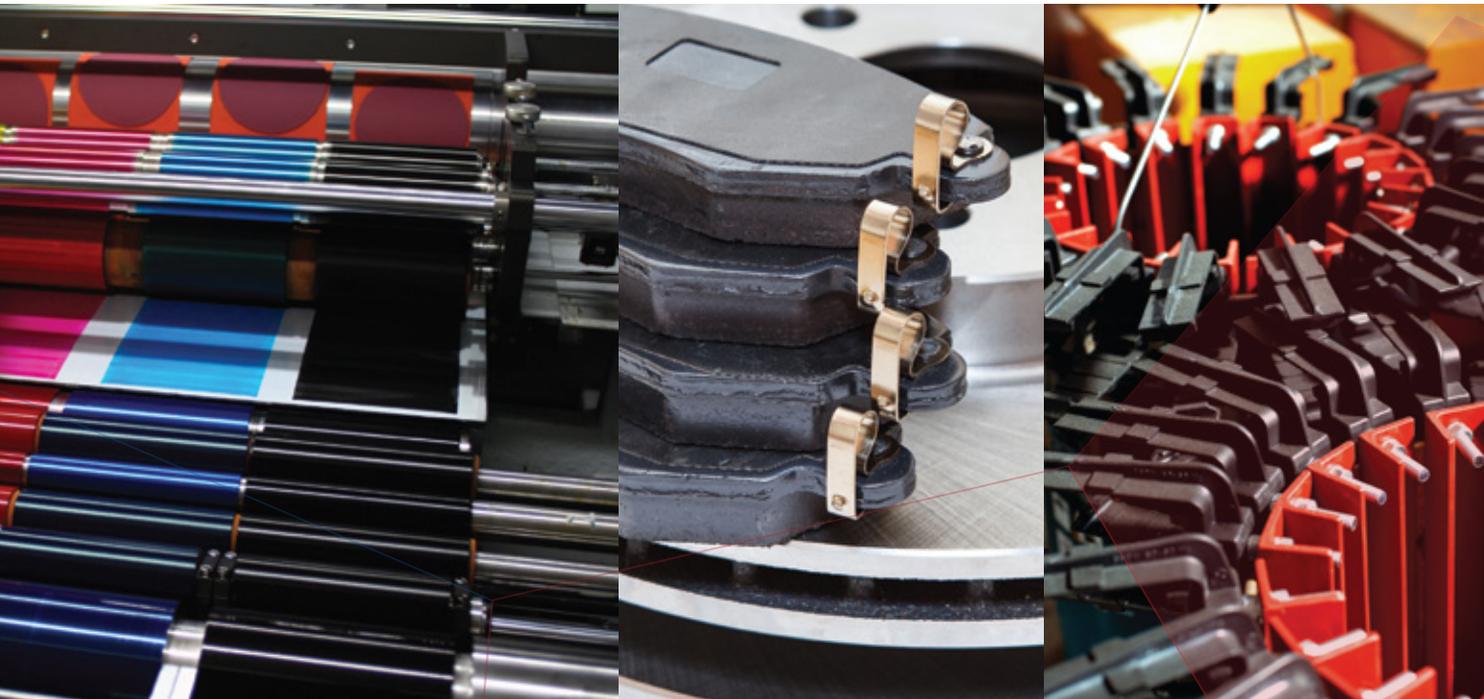
NBR Paraclean

Paraclean NBR has been developed to provide a low residue, fast curing grade of NBR. Paraclean grades are cold polymerized for best processing characteristics.

NBR/PVC Paracril

Paracril OZO is a fluxed blend of NBR and PVC. The most common ratio of NBR to PVC is 70/30. A higher PVC content of 40% is used in applications such as sponge where very low densities can be achieved through the uniform expansion of the chemical foaming agent. Paracril OZO offers inherent resistance to OZONE, good colorability, smooth surface appearance, abrasion resistance, processing ease, and flame resistance.

Plasticizer extended grades are also available that contain as high as 70 parts of phthalate for low durometer rolls.



EMULSION NBR

APPLICATION GUIDE

NBR PRODUCT

Type	Brand	Grade	BAN (%)	PVC (%)	Base polymer	ML	Pre-crosslinked	Fluex blends 70 NBR/30 PVC
NBR 2.0	Paracril	1945	19			45		
NBR 2.0	Paracril	2850	28			50		
NBR 2.0	Paracril	3335	33			35		
NBR 2.0	Paracril	3350	33			50		
NBR 2.0	Paracril	3380	33			80		
NBR	Paracril	33110	33			110		
NBR	Paracril	AJ	23.5			48		
NBR	Paracril	ALT	26			73		
NBR	Paracril	AJLT	27.5			40		
NBR	Paracril	AJLT M50	27.5			50		
NBR	Paracril	N41F	29			77		
NBR	Paracril	B	29.5			85		
NBR	Paracril	BJ	29.5			50		
NBR	Paracril	BPLT	31			38		
NBR	Paracril	BJLT-M30	32.5			30		
NBR	Paracril	BJLT-M40	32.5			40		
NBR	Paracril	BJLT-M50	32.5			50		
NBR	Paracril	BLT-M75	32.5			75		
NBR	Paracril	BLT-M80	32.5			80		
NBR	Paracril	C	35			80		
NBR	Paracril	CLM	35			68		
NBR	Paracril	CLT	40			65		
NBR	Paracril	CJLT	40			50		
NBR	Paracril	34PE40N	34			40		
NBR	Paracril	BJLT-HX	32			55	◆	
NBR	Paracril	P32.50XL	33			50	◆	
NBR	Paracril	P32.60XL	32			50	◆	
NBR	Paracril	P33.55XL	32.5			55	◆	
NBR	Paracril	P33.80XL	33			80	◆	
NBR	Paraclean	28L35	28			45		
NBR	Paraclean	28L80	28			80		
NBR	Paraclean	33L35	33			35		
NBR	Paraclean	33L50	33			50		
NBR/PVC	Paracril	OZOM50		30		50		◆
NBR/PVC	Paracril	OZOM58		30		58		◆
NBR/PVC	Paracril	OZ0728M60		30		60		◆
NBR/PVC	Paracril	OZOP7510N		21.4		20		
NBR/PVC	Paracril	OZOSP90N		23.5		21		
NBR Powder	Paracril	P33110C1	33		P33.110	110		
NBR Powder	Paracril	P3250XP	32		P32.50XL	50	Partial	
NBR Powder	Paracril	P3350CC	32.6		BJLT M50	48.5		
NBR Powder	Paracril	P3350CC2	32.6		P33L50	50		
NBR Powder	Paracril	P3380CC1	32.5		BLT M80	80		
NBR Powder	Paracril	P3380XP	33		P33.8XL	81.5	High	
NBR Powder	Paracril	P7092P	33		P33.55XL	55	High	
NBR Powder	Paracril	P3380CS	33		BLT M80	80		
NBR Crumb	Paracril	CV	35.2		CLM	67.5		
NBR Crumb	Paracril	CV80	35.2		CLM	80		
NBR Crumb	Paracril	C3380CC	32.6		BLT - M80	80		
NBR Crumb	Paracril	P7087CR	32.5		BJLT - M50	50		
NBR Spray Dried	Paracril	SD3811	38			115		
NBR Spray Dried	Paracril	SD3811C	38			115		



APPLICATION

Applications

Seals, custom mix
 Seals, custom mix, rolls
 Seals, rolls
 Seals, rolls
 Seals, rolls

Seals, rolls, mechanical goods
 Seals, custom mix
 Seals, custom mix, hoses
 Seals, custom mix, mechanical goods
 Seals, rolls, hoses
 Seals, hoses, mechanical goods
 Seals, custom mix, mechanical goods, sponge
 Seals, custom mix, mechanical goods, sponge, adhesives
 Seals, custom mix, mechanical goods, rolls, hoses
 Sponge, seals, hoses, plastic modification, mechanical goods, custom mix
 Seals, hoses, footwear, rolls, custom mix, mechanical goods
 Seals, hoses, footwear, rolls, custom mix, mechanical goods, adhesives
 Sponge, seals, plastic modification, custom mix
 Seals, hoses, rolls, custom mix
 Seals, custom mix, adhesives
 Seals, custom mix, adhesives
 Seals, custom mix, hoses
 Seals, custom mix, hoses, adhesives
 Rolls, custom mix
 Seals, hoses
 Plastic modification, custom mix
 Plastic modification, custom mix
 Plastic modification, custom mix
 Plastic modification, custom mix, friction

Sponge, rolls, custom mix
 Sponge, rolls, custom mix
 Seals, footwear, custom mix
 Seals, footwear, custom mix, rolls, adhesives

Seals, hoses, wire & cable, custom mix, mechanical goods
 Footwear, rolls, hoses, wire & cable, custom mix, mechanical goods
 Wire & cable
 Rolls, custom mix
 Rolls, custom mix

Plastic modification, rolls
 Plastic modification
 Plastic modification, rolls
 Plastic modification, adhesives
 Plastic modification, adhesives
 Plastic modification
 Plastic modification
 Plastic modification, adhesives

Adhesives
 Adhesives
 Adhesives, hoses
 Plastic modification

Friction
 Friction



NBR 2.0 | PARACRIL

Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paracril 1945	Paracril 1945 is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer.	Offers excellent low temperature flexibility with moderate oil resistance. It is recommended to meet military specifications and aircraft applications including O-rings, seals, gaskets, grommets, diaphragms, and blends with other PARACRIL® polymers to give intermediate low temperature properties.	19	45
Paracril 2850	Paracril 2850 is a copolymer of butadiene and acrylonitrile, cold polymerized with a nonstaining stabilizer.	Offers excellent balance of low temperature flexibility with oil resistance, easy processing, fast curing, light color and good performance in peroxide cure systems. It is recommended for automotive products, seals, hoses, O-rings, packings, footwear, rolls and thermoplastic blends.	28	50
Paracril 3335	Paracril 3335 is a copolymer of butadiene and acrylonitrile, cold polymerized with a nonstaining stabilizer.	Offers excellent balance of low temperature flexibility with oil resistance, easy processing, fast curing, light color and a good performance in peroxide cure systems. It is recommended for automotive products, seals, hoses, O-rings, packings, footwear, rolls and thermoplastic blends.	33	35
Paracril 3350	Paracril 3350 is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer.	Offers excellent balance of low temperature flexibility with oil resistance, easy processing, fast curing, light color and a good performance in peroxide cure systems. It is recommended for automotive products, seals, hoses, O-rings, packings, adhesives, footwear, rolls and thermoplastic blends.	33	50
Paracril 3380	Paracril 3380 is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer.	Offers excellent balance of low temperature flexibility with oil resistance, easy processing, fast curing, light color and a good performance in peroxide cure systems. It is recommended for automotive products, seals, hoses, O-rings, packings, adhesives, footwear, rolls and thermoplastic blends.	33	80

NBR | PARACRIL

Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paracril 33.110	Paracril 33110 is a copolymer of butadiene and acrylonitrile, cold polymerized and non-staining stabilized.	Offers excellent balance of low temperature flexibility with oil resistance, high viscosity for improved green strength and increased oil content recipes, fast curing and light color. It is recommended for use in roll covers, automotive products, seals, hoses, Orings and packings.	33	110
Paracril AJ	Paracril AJ is a copolymer of butadiene and acrylonitrile, hot polymerized with a non-staining stabilizer.	Offers an excellent low temperature flexibility with moderate oil resistance and a good processing. It is recommended for seals, O-Rings, and grommets, for hose and tubes requiring low temperature flexibility and blends with other Paracril grades.	23.5	48



Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paracril ALT	Paracril ALT is a copolymer of butadiene and acrylonitrile, cold polymerized with a nonstaining stabilizer.	Offers excellent balance of low temperature flexibility with moderate oil resistance, good extrusion characteristics, low corrosion and low water absorption. It is recommended for hose and tubes requiring low temperature flexibility, Orings, seals, gaskets, grommet, diaphragms, coated fabrics and roll covers.	26	73
Paracril AJLT	Paracril AJLT is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer.	Offers an excellent balance of low temperature flexibility with moderate oil resistance, good extrusion characteristics, low corrosion and low water absorption. It is recommended for seals, O-Rings, gaskets, grommets, diaphragms, coated fabrics and roll covers.	27.5	40
Paracril AJLTM50	Paracril AJLTM50 is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer.	Offers excellent balance of low temperature flexibility with moderate oil resistance, good extrusion characteristics, low corrosion and low water absorption. It is recommended for hose and tubes requiring low temperature flexibility, O-rings, seals, gaskets, grommets, diaphragms, coated fabrics and roll covers.	27.5	50
Paracril N41F	Paracril N41F is a copolymer of butadiene and acrylonitrile, cold polymerized with a semi staining stabilizer. Good low temperature flexibility and oil resistance.	Offers an excellent green strength, fast curing and low water absorption. It is recommended for extruded products, hoses, O-rings, seals, gaskets, grommets, diaphragms and blends with PVC.	29	77
Paracril B BJ	Paracril B and BJ are copolymers of butadiene, hot polymerized and acrylonitrile with a non-staining stabilizer, good low temperature flexibility and oil resistance.	Offers excellent balance of low temperature flexibility with oil resistance and a high green strength. It is recommended for automotive products, seals, hoses, O-rings, packing's, adhesives, sponge, coated fabrics and roll covers.	29.5 29.5	85 50
Paracril BPLT	Paracril BPLT is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Fast mixing and lower heat buildup with minimum power consumption.	Offers an excellent balance of low temperature flexibility with oil resistance, fast mixing, low water absorption and low corrosion. It is recommended for automotive products, seals, hoses, O-rings, packings, and thermoplastic blends.	31	38
Paracril BLT-M30 BLT-M40 BJLT-M50 BJLT-M75 BJLT-M80	This Paracrils are copolymers of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Fast mixing and lower heat buildup with minimum power consumption.	Offers excellent balance of low temperature flexibility with oil resistance, fast mixing, low water absorption and low corrosion. It is recommended for automotive products, seals, hoses, O-rings and packing's, adhesives, oil field specialties, wire and cable, footwear, rolls and thermoplastic blends.	32.6 32.6 32.6 32.6 32.6	30 40 50 75 80
Paracril C	Paracril C is a copolymer of butadiene and acrylonitrile, hot polymerized with a non-staining stabilizer. Good resistance to fuels and mineral oils. Very good abrasion resistance.	Offers an excellent balance of low temperature flexibility with oil resistance, fast mixing, low water absorption and low corrosion. It is recommended for automotive products, seals, hoses, O-rings, packings, and thermoplastic blends.	35	80
Paracril CLM	Paracril CLM is a copolymer of butadiene and acrylonitrile, hot polymerized with a non-staining stabilizer. Similar to Paracril C but has lower viscosity.	Offers an excellent oil resistance with moderate low temperature flexibility, good green strength, and low gel content. It is recommended for seals, hoses, O-rings, packings, adhesives, and printing blankets.	35	68
Paracril CLT	Paracril CLT is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Superior oil resistance. Low corrosion and mold fouling.	Offers superior oil resistance, good processing properties and low water absorption. It is recommended for seals, O-rings, packings and grommets, printing blankets, rolls, oil field specialties, fuel hoses and mechanical goods.	40	65



Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paracril CJLT	Paracril CJLT is a copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Superior oil resistance. Low corrosion and mold fouling.	Offers a superior oil resistance, good processing properties and low water absorption. It is recommended for seals, O-rings, packings and grommets, printing blankets, rolls, oil field specialties, fuel hoses and mechanical goods.	40	50
Paracril 34PE40N	Paracril 34PE40 is a copolymer of butadiene and acrylonitrile, Plasticized with 50 parts of DINP, cold polymerized with non-staining stabilizer.	Is recommended for use in low durometer roll covers, footwear, in highly plasticized recipes and blends to improve abrasion resistance in NBR recipes.	34	40
Paracril BJLTHX	Paracril BJLTHX is a copolymer of butadiene and acrylonitrile, cold polymerized with staining and discoloring stabilizer.	Offers good heat resistance after oil aging, partially cross-linked, excellent green strength, smooth extrusion and low die swell. It is recommended for hose, seals, and O-rings, lathe cut gaskets, belting, calendared products and pan seals.	32	55
Paracril P32.50XL	Paracril 32.50XL is a copolymer of butadiene and acrylonitrile, with medium-high crosslinking level. It is stabilized with a non-staining and non-discoloring stabilizer.	Offers excellent green strength, smooth extrusion, low die swell and a good stability. It is recommended for use in PVC modification, in thermoset rubber compounds, extrusions, lathe-cut gaskets and for calendared products.	33	50
Paracril P32.60XL	Paracril 32.60XL is a copolymer of butadiene and acrylonitrile, with medium-high crosslinking level. It is stabilized with a non-staining and non-discoloring stabilizer.	Offers excellent green strength, smooth extrusion and low die swell. It is recommended for use in extrusions and lathe-cut gaskets, calendared products and PVC modifications.	32	50
Paracril P33.55XL	Paracril 33.55XL is a copolymer of butadiene and acrylonitrile, highly cross linked. It is stabilized with a non-staining and non-discoloring stabilizer.	Offers excellent green strength, smooth extrusion and low die swell. It is recommended for use in PVC modification, blends with clear NBR to improve green strength, extruded and calendared products.	32.5	55
Paracril P33.80XL	Paracril 33.80XL is a copolymer of butadiene and acrylonitrile, highly cross linked. It is stabilized with a non-staining and non-discoloring stabilizer.	Offers excellent green strength, smooth extrusion and low die swell. It is recommended for use in PVC modification, blends with clear NBR to improve green strength, extruded and calendared products.	33	80

NBR | PARACLEAN

Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paraclean 28L35	Paraclean 28L35 is a state-of-the-art copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Unique features include "clean" low-fouling performance, low volatility at elevated temperatures, and fast cure rates.	Offers "clean" low-volatility NBR fast curing, excellent low temperature flexibility with moderate oil resistance, low water absorption and resistant to corrosion. It is recommended for injection molded products, O-rings, seals, gaskets, grommets, diaphragms, hoses and tubes requiring low temperature flexibility.	28	45
Paraclean 28L80	Paraclean 28L80 is a state-of-the-art copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Unique features include "clean" low-fouling performance, low volatility at elevated temperatures, and fast cure rates.	Offers "clean" low-volatility NBR, fast curing, excellent low temperature flexibility with moderate oil resistance, low water absorption and resistant to corrosion. It is recommended for sponge, extrusions, O-rings, seals, gaskets, grommets, diaphragms, hose and tubes requiring low temperature flexibility.	28	80



Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paraclean 33L35	Paraclean 33L35 is a state-of-the-art copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Unique features include "clean" low-fouling performance, low volatility at elevated temperatures, and fast cure rates.	Offers "clean" low-volatility NBR for injection molding, fast curing, low water absorption and low corrosion. It is recommended for injection molded products, O-rings, seals, gaskets, grommets, diaphragms, sponge and for blends with PVC.	33	35
Paraclean 33L50	Paraclean 33L50 is a state-of-the-art copolymer of butadiene and acrylonitrile, cold polymerized with a non-staining stabilizer. Unique features include "clean" low-fouling performance, low volatility at elevated temperatures, and fast cure rates.	Offers "clean" low-volatility NBR for injection molding, fast curing, low water absorption and low corrosion. It is recommended for injection molded products, O-rings, seals, gaskets, grommets, diaphragms, footwear, sponge and for blends with PVC.	33	50

NBR/PVC | PARACRIL OZO

Brand Grade	Description	Uses	PVC (%)	ML 1+4 100°C
Paracril OZOM50	Paracril OZOM50 is a pre-fluxed blend of NBR/PVC containing 30% PVC.	Offers easy processing, excellent abrasion resistance, good flame resistance and an excellent ozone resistance. It is recommended for shoes soles, wire, cable, hoses, tubing, coated fabrics, belting, closed cell sponge and molded mechanical goods.	30	50
Paracril OZOM58	Paracril OZOM58 is a pre-fluxed blend of NBR/PVC containing 30% PVC.	Offers easy processing, good abrasion resistance, good flame resistance and an excellent ozone resistance. It is recommended for wire, cable, shoe soles, hoses, tubing, coated fabrics, belting, and closed cell sponge and for molded mechanical goods.	30	58
Paracril OZO728M60	Paracril OZOM60 is a pre-fluxed blend of NBR/PVC containing 30% PVC and 28% Bound ACN NBR base polymer.	Offers good tensile properties, good green strength, good abrasion resistance, good flame resistance and an excellent ozone resistance. It is recommended for wire, cable, footwear, extrusions, coated fabrics and belting.	30	60
Paracril OZOP7510N	Paracril OZOP7510N is a pre-fluxed blend of 100 NBR / 60 PVC / 120 DINP.	Offers easy processing, excellent abrasion resistant, good flame and ozone resistance. It is recommended for low durometer roll covers.	21.4	20
Paracril OZOSP90N	Paracril OZOSP90N is a pre-fluxed blend of 100 NBR / 67 PVC / 117 DINP.	Offers easy processing, excellent abrasion resistant and a good ozone resistance. It is recommended for low durometer roll covers.	23.5	21



NBR POWDER | PARACRIL

Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paracril P33110C1	Paracril 33110C1 is a copolymer of butadiene and acrylonitrile in powder form using calcium carbonate with 1% calcium stearate as partitioning agent.	Offers excellent balance of low temperature flexibility with oil resistance, high viscosity for improved green strength and increased oil content recipes, fast curing and light color. It is recommended for use in roll covers, automotive products and mechanical goods.	33	110
Paracril P3250XP	Paracril 3250XP is the powder version of the Paracril 32.50XL using PVC with 1% of calcium stearate as a partitioning agent.	Offers improved UV stability. It is recommended for use in PVC modification.	32	50
Paracril P3350CC	Paracril 3350CC is a particulate version of Paracril BJLTM50 using calcium carbonate with 1% of calcium stearate as a partitioning agent.	Is recommended for adhesives and PVC modification.	32.6	48.5
Paracril P3350CC2	Paracril 3350CC2 is a particulate version of Paraclean 33L50 using calcium carbonate with 2% of calcium stearate as a partitioning agent.	Is recommended for adhesives and PVC modification.	32.6	50
Paracril P3380CC1	Paracril 3380CC1 is a particulate version of Paracril BLTM80 using calcium carbonate with 1% of calcium stearate as a partitioning agent.	Is recommended for use in PVC modification and adhesives.	32.5	80
Paracril P3380XP	Paracril 3380XP is the powder version of the Paracril 33.80XL using PVC as a partitioning agent.	Is recommended for use in PVC modification.	33	81.5
Paracril P7092P	Paracril 7092P is the particulate version of the Paracril 33.55XL with PVC as a partitioning agent with 2% calcium stearate.	Offers high cross-linking and it is recommended for use in PVC modification.	33	55
Paracril P3380CS	Paracril P3380CS is a particulate version of Paracril BLTM80 using calcium stearate as a partitioning agent.	Is recommended for use in PVC modification and adhesives.	33	80



NBR CRUMB | PARACRIL

Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paracril CV	Paracril CV is a particulate version of Paracril CLM using soluble PVC resin as a partitioning agent.	Offers good green strength and readily solvates in MEK. It is recommended for use adhesives, solvent cast seals and grommets.	35.2	67.5
Paracril CV80	Paracril CV80 is a particulate version of Paracril C using soluble PVC resin as a partitioning agent.	Offers good green strength and readily solvates in MEK. It has higher viscosity than Paracril CV. It is recommended for use adhesives, solvent cast seals and grommets.	35.2	80
Paracril C3380CC	Paracril C3380CC is a particulate version of Paracril BLTM 80 using calcium carbonate as a partitioning agent.	Is recommended for use in PVC modification and adhesives.	32.6	80
Paracril P7087CR	Paracril 7087CR is the particulate version of Paracril BJLTM50 with PVC as a partitioning agent with 1% calcium stearate.	Offers partially cross-linked. It is recommended for use in PVC modification.	32.5	50

NBR SPRAY DRIED | PARACRIL

Brand Grade	Description	Uses	BAN (%)	ML 1+4 100°C
Paracril SD3811	Paracril SD3811 is a copolymer of butadiene and acrylonitrile in powder form using talc as the partitioning agent.	It is recommended for use in friction products.	38	115
Paracril SD3811C	Paracril SD3811C is a copolymer of butadiene and acrylonitrile in powder form using calcium carbonate as the partitioning agent.	It is recommended for use in friction products.	38	115



Dynasol Group. Madrid

Titán 15, 9th Floor
28045 Madrid, Spain
Phone: (34) 917 530 938
Fax: (34) 913 238 352

Dynasol Group. Houston

14340 Torrey Chase Boulevard Suite #365
Houston, TX 77014
Phone: (281) 885 1730
Toll Free: 1 877 559 75 68
Fax: (281) 885 17 42

marketing.dynasol@dynasol.com





Dynasol
Group

dynasolgroup.com